A monthly message from NSF's Director

A Message from the Director of the National Science Foundation

Winter in the Northern Hemisphere can be harsh, but it's little match for winter at the South Pole. And even now, in the midst of the Antarctic summer, temperatures hover below 0° Fahrenheit. By presidential directive, NSF manages the U.S. Antarctic Program, supporting researchers and providing the sophisticated logistics needed to make the science possible, including operating three, year-round research stations. This year marks the 60th anniversary of the establishment of a U.S. scientific station at the South Pole and we are grateful to the researchers and staff who brave the elements each year to explore the frontiers of knowledge in the most challenging environment on Earth.

NSF's Amundsen-Scott South Pole Station is home to a range of cutting-edge research that takes advantage of the unique setting at the Earth's axis, atop a 9,000-foot-thick ice sheet. Researchers created a detector encompassing a cubic kilometer of ice to detect neutrinos shooting through the Earth from astrophysical events like exploding stars, gamma-ray bursts and cataclysmic phenomena involving black holes and neutron stars. Other scientists are looking for clues in the light left over from the Big Bang as to how the universe formed and still others are making important observations of space weather events, which can damage electrical grids, disrupt radio signals and affect the electronic devices we depend on in our daily lives.

These examples show that as NSF-supported scientists learn about and utilize the South Pole for important scientific research, we learn more and more about how our Earth, the sun, and the universe work.

Dr. France A. Córdova
Director, National Science Foundation
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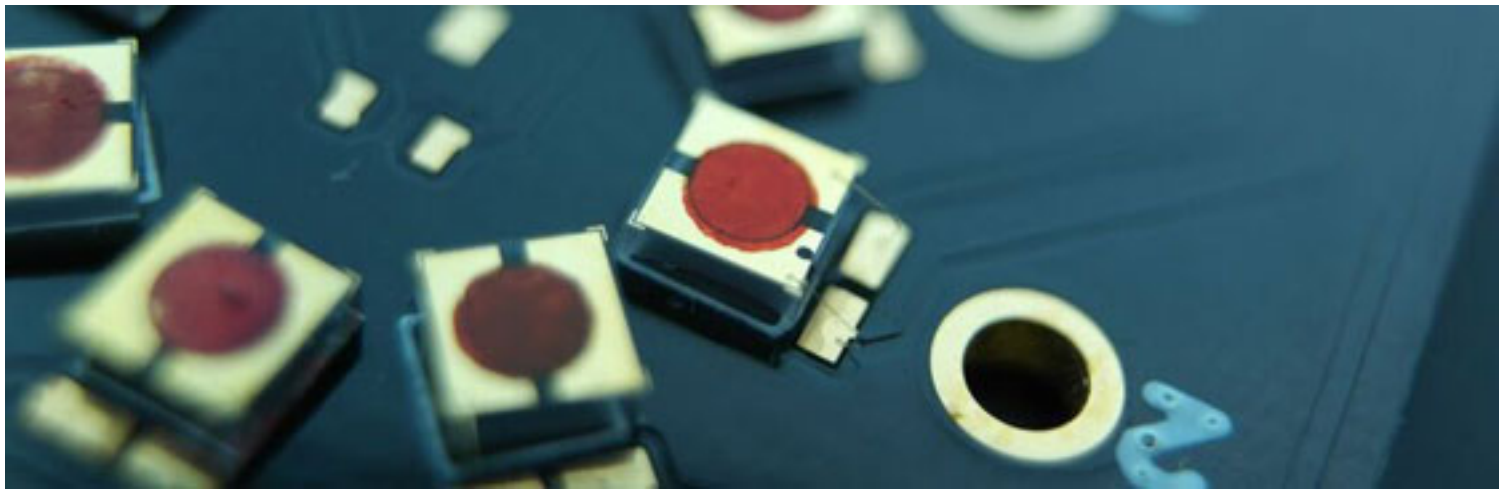
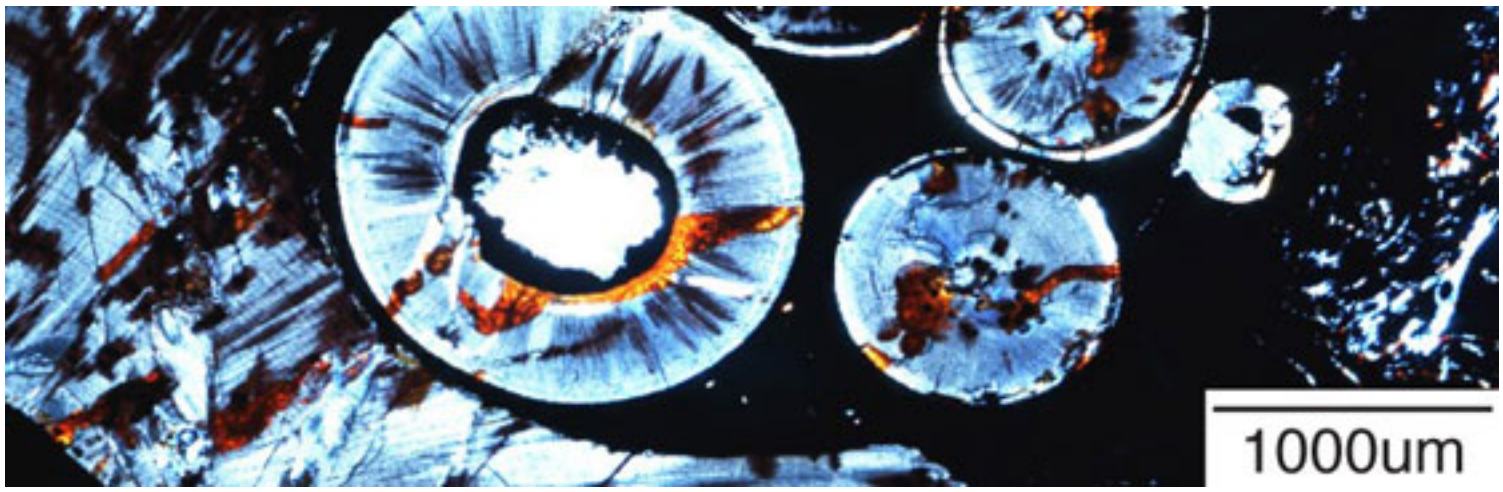
Where Discoveries Begin...



[NSF-funded startups demo tech at CES 2017 Eureka Park]
From bioprinting to adaptive learning, companies showcase early stage technologies that got their start with NSF funding.



[Ancient tumor discovered hidden inside fossil in Tanzania]
Researchers unearthed the oldest known instance of a benign dental tumor in the ancestors of mammals living 255 million years ago.

[Extreme downpours could increase 400 percent across parts of U.S.]
By century's end, parts of the U.S. could experience multiple intense summer rainfall events, with some storms as much as 70 percent more intense than today's storms.

What's Next?

Find out more about NSF's "Big Ideas" with two new resources. Watch "**Big Ideas for Future NSF Investments**" to learn about the ideas themselves.

Science Nation: A new feature on this on-line magazine explains why a cotton candy machine has a higher calling than satisfying a sweet tooth. With support from NSF, it's **whipping up polymer fibers** that may one day be a key ingredient in life-saving medical technologies.

Learn More...

This month's infographic shows how **NSF's polar programs provide valuable opportunities for researchers across the globe.**

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